7.0 CONCLUSION

Glacier Power Ltd. (Glacier Power) is proposing to construct and operate a 100-MW, low-head, run-of-river hydroelectric facility on Peace River near Dunvegan, Alberta. The power generated by the Dunvegan Hydroelectric Project (the Project) will help meet growing power requirements in northwest Alberta, and will provide significant benefit to all Alberta’s electricity consumers through reductions in transmission losses and other ancillary costs. The Project will not generate greenhouse gas (GHG) emissions, or any other emissions, and will play a key role in allowing Alberta to meet GHG reduction targets.

The Project is expected to operate for at least 100 years and will result in the creation of a 106- to 215-ha headpond, but will not regulate flow on Peace River. Project location and project size, in particular weir height and generation potential, were selected in order to minimize environmental effects by largely confining inundation to the pre-Bennett Dam floodplain. The Project will generate base-load electricity in Alberta by making low-impact, efficient use of water already used by the Bennett and Peace Canyon Dams to generate power in British Columbia.

Glacier Power’s parent company, Canadian Hydro Developers, Inc. (Canadian Hydro), is a developer, owner and operator of 18 EcoLogoM-certified generating facilities in British Columbia, Alberta and Ontario: 12 run-of-river hydroelectric plants, 5 wind plants and 1 biomass plant. The development of low-impact, renewable power projects is the driving focus of the company. Canadian Hydro and its subsidiaries are fundamentally committed to protecting the environment through all phases of project design and development. Canadian Hydro and its core team of engineering consultants have successfully designed and constructed many run-of-river hydroelectric facilities across Canada over the last 15 years, and are currently engaged in the permitting and construction of five other run-of-river hydroelectric plants in British Columbia and Ontario.

This Environmental Impact Assessment (EIA) for the Project is required by Alberta Environment, under the Alberta Environmental Protection and Enhancement Act. The EIA acts as a supplement to applications to Alberta Environment (AENV) for approval under the Water Act, to the Alberta Energy & Utilities Board (EUB) and to the Natural Resources Conservation Board (NRCB) for approvals.

The EIA is based on technical studies of environmental components and the assessment of environmental effects following a methodology based on the requirements of the Canadian Environmental Assessment Act. Cumulative effects have been assessed as an integral part of the analysis of each valued environmental component (VEC).

Fourteen VECs were identified for the Project, based on input from stakeholders and the public, input from government regulators, and the professional opinion of the study team. These VECs are:

- geotechnical
- climate, air quality and noise
- water quality
- surface water hydrology and groundwater
- ice formation and breakup
- fish community
- soil, vegetation and forestry resources
- wildlife
• transportation
• land and water uses
• visual resources
• historical resources
• health and safety
• socio-economic factors

The assessment of the interactions of the Project with the VECs concluded that most interactions result in effects that are not significant or positive. The effects assessment for the fish community concludes that a significant adverse effect is restricted to the local fish community. It is the result of Project effects on three specific local populations: walleye, burbot, and mountain whitefish. Viable, self-sustaining walleye and burbot populations reside upstream and downstream of the Project area, while a viable, self-sustaining mountain whitefish population resides upstream of the Project area. It is the conclusion of the fish community effects assessment that there will be no significant adverse effect by the Project to the regional fish community. As such, the Peace River fish community is not at risk from the proposed Dunvegan Project.

Through project design and the development of mitigation measures that will be implemented during all phases, the effects of the Project will be not significant or positive for all other VECs.

Positive effects, in addition to producing low-impact renewable energy, will occur through the creation of new fish overwintering habitat, the potential reduction of ice-related flood risks at the Town of Peace River, increased access with a new boat launch in the area of the facilities, economic and employment benefits for regional residents and municipal governments, and through the substantial research and development work already completed, as well as important research opportunities in the future.

Glacier Power initiated a public and Aboriginal consultation program in 1999, and has continued with the program through to 2006 by consulting with the public, landowners, stakeholder groups, First Nations and Métis groups, and municipal, provincial and federal government regulators to inform them of the Project, hear feedback and engage in discussions to resolve concerns. This consultation program is ongoing and will continue throughout project development.

Glacier Power is committed to designing, constructing and operating the Project in an environmentally responsible manner. Glacier Power will develop an Environmental Management Program for the Project, including an Environmental Protection Plan, a Fisheries Mitigation and Compensation Plan, a Monitoring Plan and an Emergency Response Plan.

In addition to the thoroughly researched low-impact nature of the Project design, the economic, infrastructure and environmental benefits associated with the Project all contribute to the positive opportunity that the Project presents to Albertans; the opportunity to take advantage of one of Alberta’s important renewable resources to generate long-term, reasonable cost, base-load power, without any GHG emissions, in a region of Alberta where there is a electricity-generation deficit and related transmission inefficiencies. The Project represents a rare opportunity for Alberta, as locations where the development of this kind of long-term, renewable power is possible in the province are few. Given Alberta’s focus on the development of non-renewable fossil fuel resources, the need for developing opportunities like the Dunvegan Hydroelectric Project to achieve a balanced electrical generation portfolio is critical.